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ABSTRACT

The Competency Based Bilingual/Bicultural Project at Eastern District High School in New York City is an integrated bilingual demonstration project designed to develop English and native language skills as well as instill positive self concepts among high school students with Spanish-speaking backgrounds. In 1980-1981, the program provided instruction in English as a second language, reading, native language arts, bilingual instruction in content areas, and vocational/career guidance. This report describes the program setting; participants; philosophy and organization; student placement; instructional and non-instructional services; program implementation; and program evaluation. Results of evaluation indicate that: (1) significant gains were achieved in English reading, language fluency, native language reading, and mathematics; and (2) program attendance rates were higher than school-wide attendance rates. The report suggests that the program was successful and presents recommendations for greater program effectiveness. (Author/MJL)

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FINAL EVALUATION REPORT

E.S.E.A. TITLE VII

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EASTERN DISTRICT HIGH SCHOOL

COMPETENCY BASED BILINGUAL/

BICULTURAL PROJECT

1980-1981

Principal: Mr. David Dicker

Director: Ms. Haydee C. Surillo

Prepared by the
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NEW YORK CITY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL EVALUATION
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EASTERN DISTRICT HIGH SCHOOL
INTEGRATED BILINGUAL DEMONSTRATION PROJECT
COMPETENCY BASED BILINGUAL/BICULTURAL PROJECT

Location:	850 Grand Street, Brooklyn, New York 11211
Year of Operation:	1980-1981, first of three years
Target Language:	Spanish
Number of Participants:	413
Principal:	Mr. David Dicker
Director:	Ms. Haydee C. Surillo

I. DEMOGRAPHIC CONTEXT

ENVIRONMENT

While Eastern District High School has always been located in the Greenpoint-Williamsburg section of Brooklyn, on April 1, 1981 it opened in a new building in a new location in that area. Unremarkable in itself, the neighborhood contrasts sharply and favorably with the run-down and depressing one out of which the school only recently moved. Its current location is clearly a viable residential and shopping area, a working-class neighborhood with a mixed racial and ethnic population. The buildings in the immediate area of the school are primarily three- or four-story residential buildings with the bottom floor of those structures on Grand Street taken up by small stores. The school building adjoins a local shopping area, with bakeries, clothing stores, and butchers lining both sides of the street. Board of Education property, a large vacant lot in the back of the school, currently filled with bricks and rubble, is the planned site of school athletic and parking fields. A subway stop is at the corner of the school.

The school population, 81.9 percent Hispanic with the rest nearly all non-Hispanic black students, is not completely representative of District 14. The Hassidic Jews and, for the most part, the Italian and Polish students in the attendance area do not attend Eastern District: the former go to Jewish religious schools and many of the latter go to Catholic parochial schools or to Grover Cleveland or Ridgewood High Schools.

SITE CHARACTERISTICS

With the exception of the science laboratory, the program is centered on the top floor of Eastern District High School, a four-story building that has been in use only a few months. With 1,854 students attending this year and 3,400 expected in September, the new building has a capacity of 4,000 students. The condition of the building is notable in contrast to the previous one, which was in serious disrepair and greatly overcrowded, providing a generally depressing educational environment. The new building is clean, well-lit, and brightly painted.

As opposed to its previous setting as part of a physically separate mini-school, the program is located in the high school itself. It centers around the two fourth-floor offices: the administrative office used by the program director, the coordinator, and the secretary; and the foreign language office used by resource teachers, paraprofessionals, and the guidance counselor. The former encompasses an outer and inner office separated by a door and plate-glass window. The coordinator and secretary use the outer office, while the inner office is used by the director and lends itself well to private meetings with staff, students, and parents. At an adjacent corner of the same floor is the foreign language office, a complex of classrooms built around a large central room. While the large room can be used for meetings of up to 100 people,

the five classrooms around it can be used for classes or for tutoring. Partitions allow for two of the classrooms to become either one large space or two smaller ones, depending on the number of students in a class. The resource teacher uses a desk in the central room, while the guidance counselor works in the end room, a space set up not as a classroom but as a library and homework area. The science laboratory on the floor below, which is assigned specifically to the program, was the only functioning laboratory in the school six weeks after the move to the new building. While the recent move and the intervening spring vacation meant that books, posters, and other material were still to be taken from cartons, the program's physical setting is fundamentally a pleasant one.

II. STUDENT CHARACTERISTICS

COMPOSITION AND DIVERSITY

Eastern District High School has the highest concentration of limited English proficiency (LEP) students in Brooklyn, the third highest in New York City. The target population consists of 413 Hispanic students. Ninety-six percent of them live in the district; a few have moved as far away as the Bronx but continue in the program and a few have been assigned by the Board of Education.

Approximately 96 percent of the program students are foreign born. Table 1 presents a breakdown by country of origin of students for whom information was reported.

Table 1. Number and percentages of students by country of birth. (N=294)

COUNTRY OF BIRTH	N	PERCENT
Puerto Rico	109	37%
Dominican Republic	75	25%
Ecuador	55	19%
U.S.	12	4%
El Salvador	11	4%
Colombia	11	4%
Nicaragua	9	3%
Mexico	5	2%
Honduras	4	1%
Panama	2	--
Guatemala	1	--
TOTAL	294	99%

- The highest percentage of students (37 percent) was born in Puerto Rico.
- The second highest percentage of students (25 percent) was born in the Dominican Republic.
- Four percent of the program students were born in the United States.

Because there may be selective personal and environmental pressures on students in urban communities, the composition of the student body may vary from school to school and grade to grade within a school. Table 2 presents the distribution of bilingual program students by grade and sex.

Table 2. Number and percentages of students by sex and grade. (N=305)

GRADE	MALE N	MALE %	FEMALE N	FEMALE %	TOTAL N	TOTAL PERCENT OF ALL STUDENTS
9	35	38%	57	62%	92	30%
10	37	40%	55	60%	92	30%
11	27	35%	49	65%	76	25%
12	18	40%	27	60%	45	15%
TOTAL	117	38%	188	62%	305	100%

- The student population decreases as the grade level increases from 30 percent in the ninth grade to 15 percent in the twelfth grade.
- In all grades, the percentages of female students are higher than the percentages of male students.

Because so many of the Eastern District bilingual students are immigrants, their educational histories may vary considerably. Many have suffered interrupted schooling, or, because of a lack of educational opportunities in their countries of origin, have received fewer years of education than their

grade level would indicate. Bilingual program students are reported by age and grade in Table 3.

Table 3. Number of students by age and grade*. (n=246)

AGE	GRADE 9	GRADE 10	GRADE 11	GRADE 12	TOTAL
14	2				2
15	18				18
16	22	24	4		50
17	16	35	21	1	73
18	5	10	31	13	59
19	2	5	6	13	25
20			5	8	13
21	1		2	1	4
22			1		1
TOTAL	66	74	70	36	246
Percent Overage For Their Grade	70%	68%	64%	61%	66%

*Shaded boxes indicate the expected age range for each grade.

.Sixty-six percent of the bilingual program students are overage for their grade.

.The highest percentage of overage students occurs in the ninth grade.

As Table 3 indicates, the fact that so many students are overage may have implications for interpreting student outcomes and setting standards for expected rates of growth. These are students who have missed a year or more of

school, whose grade placement may reflect their age more than their prior educational preparation. As a result they may have a lack of cognitive development in their native language which must be addressed, as it has implications for their ability to acquire oral and literacy skills in English.

Program students reflect considerable diversity in terms of skills levels. Twenty percent are totally illiterate, including a large number of students from the Dominican Republic who have minimal previous formal education. Twenty percent enter the program with excellent skills, the product, for the most part, of Latin American religious schools or military academies, or of urban schools in Puerto Rico.

PARTICIPANT SELECTION

New student participants in the Competency Based Bilingual Bicultural Project are usually identified at the time of registration. During registration, the project director interviews every Hispanic student to both inform the student of the bilingual project at Eastern District and also initially assess the student's potential for participation in the project. This entry interview consists of: informal testing (each student is asked to read a paragraph in English and Spanish and to write a paragraph in those languages), and a discussion of the student's educational background, and an assessment of other personal, social, emotional, health, and family needs. Along with the interview the student is administered the Language Assessment Battery (LAB). In the New York City school system all Hispanic surname students entering a school are administered the LAB. All students scoring below the twentieth percentile are eligible to participate in the school's bilingual education program. The LAB determines a student's level of proficiency in both English and Spanish.

Although it is unclear as to how many students in the project had more than one year's experience in bilingual classes (provided either at a former school or at Eastern District) some of the students interviewed by the evaluator did indicate that they had been in bilingual classes before. The evaluator spoke in English and Spanish to the students interviewed. Most spoke English and Spanish and quite a few spoke English well or proficiently.

When asked to explain the project policy or criteria for student selection the director stated that given the large numer of Hispanic students at the high school and the large proportion of those eligible to participate in the project, a priority system, based strictly according to need, had been established. This priority system designates non-English speaking youngsters recently arrived in the United States as having the first opportunity to participate in the project. Second priority is given to those newly-arrived students recommended by the feeder schools. The students recommended are those who may have been in the lower school for a semester or less and have not had the chance to benefit from bilingual education. The last priority is given to students who have been in the project one to two years and who attained enough competency in the English language sufficient to function in regular classes, but whose school profiles indicate a potential for greater success in school within the project rather than in the mainstream.

When asked to explain what in the student's school profile would indicate the potential for greater success within the project rather than the mainstream, the director explained that the indicators were not test scores, but observations and interviews of the student that indicate that the student

would, perhaps, drop out of school if placed in a more impersonal, less reassuring educational climate. The director stressed that a major thrust of the bilingual project at Eastern District is to offer not only linguistic skills, but also the information and understanding needed to negotiate new cultural terrain.

III. PROGRAM DESCRIPTION

PROGRAM PHILOSOPHY

The major philosophical goal of the program is to instill in its students a positive identity about themselves as individuals whose native language is Spanish. A key focus, therefore, is to counteract negative feelings students have internalized about their background and their potential. Some students, the director said, check "other" rather than "Spanish" as the language spoken at home out of a feeling of shame at being native speakers of that language. The effort to make the students feel an integral, important part of the community, not second-class members of it, is reflected not only in the concern of the director and other staff members for individual students, but in the visibility of the program as a model for which students and staff alike deserve credit. During the evaluators' visit, for instance, Councilperson Luis Olmedo addressed an ASPIRA meeting, and members of the bilingual program from John Jay High School and students from Boricua College visited the school. Such outside attention has a clearly positive affect on students' motivation and self-image.

While the strong commitment of the director to her program benefits its students immeasurably, it also places the program in something of an adversary position to other school programs that do not necessarily have outside funding or a single person to act as a forcible advocate. The disproportionate success of the program students, while excellent for their morale, presents problems for students and staff in the rest of the school who appear unsuccessful and unproductive by comparison. Recognizing the success of the program's mini-school model, the principal is planning to have the school divided within the next two to three years into several mini-schools, each headed by an

assistant principal. By the fall of 1981, the ninth year will function as a mini-school, as will a group of students whose attendance has been, at best, sporadic; future plans will provide for a mini-school approach for students in secretarial studies, metal working, pre-college bound, and other academic areas. The principal seemed very enthusiastic about both the program and the model it provides for the restructuring of the rest of the school. A supervisor of bilingual programs for twenty years, he has taught E.S.L. to parents in the evening, which has helped him keep closely in touch with the problems of the program students and their families.

The director expressed concern for decreasing the sense of separation that existed in the previous building where the mini-school operated out of a separate structure. She saw the move as a step toward better integrating the program into the school as a whole, a goal whose success can only be demonstrated during future semesters.

ORGANIZATION AND STRUCTURE

The program functions as a mini-school within Eastern District High School. The director of the program is also the assistant principal in charge of coordinating bilingual education for non-program students and functions as the primary resource regarding Spanish-dominant students throughout the school. An experienced administrator with an excellent track record in bilingual education, the director has considerable autonomy within the program. The move to a new building and the placement of the program on one floor of it rather than in a separate building promises to make the program a more integral part of the school, but the move is too recent for any conclusion to be reached as to the extent of that integration.

IV. INSTRUCTIONAL COMPONENT

STUDENT PLACEMENT, PROGRAMMING, AND MAINSTREAMING

One notable feature of this project is the specificity and flexibility with which an educational program is developed for the individual student. The basis for individual programming is the student profile. This profile consists of: background data, including a record of the student's progress and grade level advancements; recommendations by the director, grade advisor, and teachers; and the results of various examinations. Teacher-made tests determine achievement in content areas. Performance in Spanish is assessed through the use of standardized tests, including the Interamerican Series Prueba de Lectura, the Basic Inventory of Natural Language (BINL), the LAB, the Stanford Achievement Test, the Metropolitan Reading Test, and the Criterion Referenced English Syntax Test (CREST).

Based on student assessments, they are placed in either one of two tracks. Courses in track A are structured toward illiterate or semi-literate pupils. The director pointed out that the curriculum in track A is developed by the staff taking into consideration the special circumstances of the pupils, many of whom have either had little schooling or negative school experiences. The thrust here is to provide the students with the necessary basic skills essential for school success. Specifically, indicated the director, emphasis in this track is given to writing and reading in their native language. Two intensive courses of E.S.L. are provided to these students daily. In addition, students receive one period of basic arithmetic and a social studies class. The student also receives one period of art and physical education with the mainstream.

An outline of the program for a typical track A student in the ninth grade is as follows:

Period		
	1. E.S.L.	6. Lunch
	2. Writing (E.S.L.)	7. Resource Center (Math)
	3. Native Language Arts	8. Physical Education
	4. Native Language Arts	9. Arts
	5. Bilingual Social Studies	

Courses in track B reflect more the project's intent to prepare LEP pupils to meet the promotional requirements imposed by the New York State Education Board of Regents. Some of these requirements include passing Basic and Regents Competency Tests, as well as city-wide examinations for required courses in social studies, English, and foreign languages. The director stressed that course content in track B builds on the strength of the students in their native language and attempts an intensive English language exposure generally consisting of one period of E.S.L. and one period of English reading or writing workshop. A typical ninth-grade track B student would follow a similar program as illustrated below:

Period		
	1. E.S.L.	6. General Science
	2. E.S.L.	7. Physical Education
	3. Mathematics	8. Art
	4. Social Studies	9. Resource Center
	5. Lunch	

Two previous evaluation reports (1978-79 and 1979-80) of Title VII bilingual projects at Eastern District High School indicated that a significant number of students who had attained a level of proficiency in English sufficient to be mainstreamed were not, in fact, mainstreamed but remained in the project. In these reports it was pointed out that the reason given by that project's director for allowing students who had gained proficiency in English to continue taking classes in both languages, was that a change in climate (an all English-speaking environment) would not best foster both the academic progression and school retention of many of these students. It was recommended

in these reports that if mainstreaming proved impracticable for some students, that all possible efforts be made to effect a transition to increased usage of English within the classes offered in the project.

In interviewing the project director the evaluator commented on the previous year's evaluation report and observations there on the mainstreaming issue. The director did not indicate the number of students who had been mainstreamed or would be mainstreamed after the current semester. She stated, however, that most of the students in the project were limited English-speaking pupils. Those who are proficient in English and continue in the project are recommended to stay because of their potential for failure in the mainstream and most importantly because their parents insist on their continued enrollment in the project. The policy or project objective, however, is still to have students mainstreamed after two or three years in the project. The director further pointed out that those who opted to stay in the project are given more intense English-language instruction and also take some courses in the mainstream.

The fact remains that relatively few students are actually mainstreamed and that most students who leave the project do so for other reasons than placement in all English-language programs. Table 4 presents the number of students leaving the program in 1980-1981.

It is difficult to assess the effect, if any, of not mainstreaming students at Eastern District High School. Although the evaluator spent a relatively short time at the school, two days were devoted to classroom observations both in the project and the mainstream. The instruction and content covered seemed fairly comparable with the edge in science classes

Table 4. Number of students leaving the program.

REASON FOR LEAVING	GRADE 9	GRADE 10	GRADE 11	GRADE 12	TOTAL
Fully mainstreamed	2			1	3
Discharged/ transferred to altern. program	2		2		4
Transferred to another school	2	6		1	9
Graduated				39	39
Returned to native country	7	6	3		16
Removed from program by parental option	2				2
Discharged (job)				1	1
Discharged (reason unknown)	6	1			7
Truant	11	6	2	2	21
Dropout	1	1		1	3
TOTAL	33	20	7	45	105

- Approximately 33 percent of the total program population left during 1980-1981.
- Thirty-nine students (9 percent of the total program population) were twelfth graders who graduated.
- One-fifth of the students leaving the program (5 percent of the total program population) were truant.

given to the bilingual classes for more advanced content and better class organization. The evaluator also noted that student conduct was significantly more orderly on the fourth floor, where bilingual classes are conducted, than elsewhere in the building. It is obvious that a positive school climate has been structured and maintained on the fourth floor of Eastern District High School.

FUNDING OF INSTRUCTIONAL COMPONENT

The bilingual program at Eastern District High School was staffed by the following instructional and non-instructional personnel:

Table 5. Funding of instructional component.

ASSIGNMENT	FUNDING SOURCE(S)	NUMBER OF PERSONNEL: TEACHERS	PARAPROFESSIONALS
E.S.L.		5	4
Reading (Eng.)	Tax Levy	3	1
Native Language	Tax Levy	6	
	Ch. 720	1	
Math	Tax Levy	2	1
	Title VII	1	1
Social Studies	Tax Levy	2	
	Title VII	1	
Science	Tax Levy	2	
	Ch. 720	1	
Other (Voc. Ed. etc.)	Tax Levy	3	

INSTRUCTIONAL OFFERINGS

Much of what appeared in the 1979-80 evaluation report concerning the course offerings within the program remained unchanged. The evaluator was not made aware of any new courses. The listing below indicates the core curriculum of the bilingual program.

Table 6. Instructional offerings.

COURSE TITLE AND LEVEL	NUMBER OF CLASSES	AVERAGE CLASS REGISTER	NUMBER OF CLASSES/ PERIODS PER WEEK
E.S.L. 1	2	17	10
E.S.L. 1 Intensive	2	15	10
E.S.L. 2	2	16	10
E.S.L. 3	4	18	10
E.S.L. 4	2	19	10
E.S.L. Reading Workshop	4	25	5
E.S.L. Writing Workshop	7	21	5
Native Language Arts 1	1	19	5
Native Language Arts 2	2	13	10
Spanish for Native Speakers	10	32	50
Native Language Arts Inter.	2	24	10
Biology	4	31	5
Biochemistry	1	29	5
Chemistry	1	29	5

V. NON-INSTRUCTIONAL COMPONENT

FUNDING OF NON-INSTRUCTIONAL COMPONENT

Funding of the non-instructional component is indicated in Table 7.

Table 7. Funding of the non-instructional component.

	FUNDING SOURCE(S)	PERSONNEL: NO. & TITLE(S)
Administration/ Supervision	Tax Levy Title VII	1 AP Bilingual Education 1 Bilingual Coordinator
Curriculum Development	Title VII	3 Resource Specialists (science, math, social studies)
Supportive Services	Title VII	1 Bilingual Guidance Counselor
Staff Development	Title VII	1 Bilingual Teacher Trainer

SUPPORTIVE SERVICES

The need among program students for extensive supportive services is severe. Ninety-one percent of them come from families on public assistance; the rest from families supported by low-paying jobs. Many have only recently arrived in the United States. Students come from families whose economic existence is marginal, resulting in problems in such areas as housing and health. Many students work to supplement the family income. While such jobs are essential for survival, they also cut into the time a student can spend preparing for classes; they can be particularly disruptive for the student who works at night and goes groggily to class each day. Inadequate clothing, particularly in the winter, and lack of money to replace a lost bus pass, also create obstacles for student attendance. The lack of familiarity of some parents with American laws regarding compulsory school attendance leads some parents to keep their children from school without valid reason.

While there is no apparent drug usage among program students, domestic violence, including child abuse and incest, are said to be a significant problem for some students. Even when the students are not the victims, violence within the household creates emotional difficulties that have repercussions in a student's school attendance and educational performance. However, the program has no social worker or guidance counselor whose job it is to give personal counseling. While the project director and other staff members are willing to discuss student problems when needed, none of the current staff has specialized training in this area. Furthermore, no satisfactory referral agency has yet been located to deal with this problem.

Contact with parents is maintained both by their visits to the school and by home visits on a voluntary basis by paraprofessionals who live in the neighborhood. Staff commitment to supporting the students in the program so that they can succeed academically is very high.

Vocational and Career Guidance

The program guidance counselor handles vocational and career guidance. The focus on college entrance encourages students to explore that option. Compared to the rest of the student body, a disproportionately high percentage of program students goes on to college. Students have been taken to visit schools like Columbia University during school hours and on an overnight trip to Hood College in order to get some sense of what these college settings are like.

For those students who choose not to go on to college or who need to do paid work while they complete their college education, special programs have been developed in such areas as word processing which provide a concrete and marketable skill. The state-funded job-finding program located in the school assists all program students to find post-graduation and after-school jobs.

Group Guidance

Every two months the director meets with 40 to 60 students (two official classes at a time) to discuss such issues as birth control, venereal disease, and drugs. She meets separately with female and male students. Similar group guidance is provided through trips to Lenox Hill Hospital, where female doctors and nurses speak to female students about sex education and such health areas as breast self-examination. Each group of students has gone twice this year.

STAFF DEVELOPMENT

Weekly staff development meetings, coordinated by the teacher trainer, run from September through June. They include, among other topics: testing; discipline and attendance; remediation; working with educational assistants; textbook evaluation; parental involvement; spotting the troubled child; continued integration of E.S.L. into subject areas; using the resource center; and reading improvement.

Both professional and paraprofessional staff are taking courses at different branches of the City University of New York. While professional staff are studying for advanced degrees, paraprofessionals are studying toward college degrees that will qualify them as bilingual teachers in New York City.

Staff characteristics are outlined in Table 8.

Table 8. Staff characteristics.

Function(s)	% Time Spent in Function	Date Hired	Education	License	Years of Monolingual Experience	Years of Bilingual Experience
Project Director A.P. Administration Bilingual Education	 100	1/72 2/78	B.A. M.A. M.S. Education	NYC Spanish NYS A.P. Adm. Bil. Ed.	2 Yrs. H.S. Spanish 8 Yrs. Adm.	10 Yrs.
Bilingual Coordinator	100	9/76	B.A. French M.A. Education M.S. Ed. Adm.	NYC French/Spanish/ NYS E.S.L./Italian	7 Yrs. H.S. Foreign Languages	4 Yrs. Bil. Coord.
Bilingual Guidance Counselor	100	9/73	B.A. M.A.	NYC French NYS Bilingual Guidance	17	8
Bilingual Teacher Trainer	100	9/70	B.A. M.S.-Education M.A. Administration	NYC E.S.L. & Spanish NYS DHS	0	11
Bilingual Secretary	100	10/75	B.A.	NYC School Secretary	4	6
Bilingual Resource Specialist (Math)	100	9/77	B.S. - Bil. Ed. M.S. - Bil. Ed.	NYC NYS Math	1	4
Bilingual Resource Specialist (Science)	100	2/75	M.S.	NYC Bil. Chemistry and NYS General Science DHS	9	7
Bilingual Resource Specialist (S.S.)	100	9/75	B.A., M.A. Ph.D. Candidate	NYC Social Studies NYS DHS	5	5 1/2
Bilingual Science Teacher (720)	100	9/76	M.S.	NYC Bilingual Chemistry and NYS General Science DHS	7	7
Curriculum Coordinator Bilingual Science	60 40	9/80 1/72	B.A. Science M.A. Ed. Admin.	NYC Bilingual Math H.S. NYS Bilingual Science H.S.	2 Yrs. H.S. Science	10 Yrs.
Bilingual MLA Teacher (720)	100	2/77	B.A. M.A.	NYC NYS French DHS	-	25

PARENTAL AND COMMUNITY INVOLVEMENT

In addition to individual contact with the program with regard to their child's progress, parents are involved on the E.S.L. Advisory Council which meets monthly. Meeting minutes indicate that this group functions as a means of information sharing for the program rather than as an actual advisory body. Information given out at the meetings encourages parental involvement in setting up assembly programs, accompanying classes on trips, and cooking for and working at a food fair whose proceeds have gone for additional equipment for the program's science laboratory.

Fifty-two parents are taking an E.S.L. class and 22 are in a literacy class. Both are taught on a voluntary basis by project staff who meet weekly with parents. Mothers have been requesting training in secretarial skills, particularly typing and shorthand. The program has arranged for these courses to be offered to them in the fall in cooperation with the secretarial studies department. It is also planning to write a proposal for an adult center that would train parents in entry-job skills.

The program is highly visible. A steady stream of bilingual teachers from other schools and programs visit it to explore those aspects that can be adapted to their own settings. In the past year, it was visited by five members of the British Parliament, as well as by local New York City officials. In addition, students have participated in the St. John's Science and Humanities Symposium and the Fordham University Science Symposium.

AFFECTIVE DOMAIN

Students seem to have positive attitudes toward the program. Some of the indicators are the following:

Attendance

Although the high school as a whole has an attendance rate of about 60 percent, the program has a rate of 88 percent.

Extracurricular Activities

The school has the largest ASPIRA Club in the city; this year its advisor received the Counselor of the Year Award for her contribution to the club. Other students are involved in such school-wide activities as track, the E.S.L. Club, Poetry Club, and Science Club. One program student was selected to the Daily News High School Baseball All-Stars.

Honors, College Admissions

Forty to 50 percent of the school's Arista Honor Society is comprised of program students. In the 1980-1981 year, seven of the top ten students were from the program, including the valedictorian, the salutatorian, and the third-ranking student. Awards given in recognition of students' work in the past year include: first prize for best group food science project from Long Island Institute of Food Technology; first prize for poetry in a New York City-wide high school contest; Daily News Creative Newspaper Award for "The Mini-School Gazette."

All four of the students who graduated in January, 1981, and 32 of the 35 graduating in June, 1981, have been admitted to various colleges. Of these 32, 24 were accepted by the college of their first choice.

Vandalism/Suspension

Vandalism has not been a problem in the past in the program. While the move to the new building is very recent, there is no reason to believe, on

the basis of past student performance, that vandalism will emerge as a program problem in this new setting. No students were suspended during the year.

Other Indicators

An examination of the post-high school plans of the twelfth-grade program students reveals the following:

Table 9. Post-high school plans of twelfth-grade students.

PLANS	N	PERCENT
College	27	75.0
Vocational or Career Training School	2	5.5
Job	4	11.0
Armed Forces	2	5.5
Undecided	1	3.0
TOTAL	45	100.0

- The great majority of the bilingual program seniors (75 percent) plans to attend college.
- Another 11 percent desire full-time employment after graduation.

The evaluator also noted that students on the fourth floor, where the program is located were significantly more orderly and purposeful during breaks between classes than on floors frequented primarily by non-program students. Their attentiveness and politeness were also notable during an ASPIRA Club meeting in which nearly 100 students were present and visitors were continually entering and leaving.

VI. FINDINGS

ASSESSMENT PROCEDURES, INSTRUMENTS, AND FINDINGS

The following section presents the assessment instruments and procedures used in evaluating student achievement in 1980-1981 and the results of the evaluation. Students were assessed in English language development, growth in mastery of their native language, mathematics, social studies, and science. The areas assessed and the instruments used were as follows:

English as a second language -- New York City Language Fluency Scales (Receptive and Expressive ratings); CREST (Criterion Referenced English Syntax Test, Levels I, II, and III)

Reading in English -- Metropolitan Achievement Test (Total reading, Intermediate Level, Form G)

Reading in Spanish -- Interamerican Series, Prueba de Lectura (Total reading, Form CEs, 1962 version)

Mathematics in Spanish -- The Puerto Rican Departamento de Instrucción Pública's Prueba de Aprovechamiento en Matemáticas (Intermediate Level)

Mathematics performance -- Teacher-made tests

Science performance -- Teacher-made tests

Social studies performance -- Teacher-made tests

Native language arts performance -- Teacher-made tests

Attendance -- School and program records

Drop-out rate -- School and program records

The following analyses were performed:

On pre/post standardized tests of English reading and of Spanish reading and mathematics achievement, statistical and educational significance

are reported in Tables 16, 17, and 18. Statistical significance was determined through the application of the correlated t-test model. This analysis determines whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant.

This analysis does not represent an estimate of how students would have peformed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

Educational significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen[1]. An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size

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[1]Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = small ES

a difference of 1/? = .50 = medium ES

a difference of 4/5 = .80 = large ES

New York City Language Fluency Rating Scales (see Appendix) were used to access advancement in the students' use of spoken English. These scales require the teacher to rate each student's level of comprehension (receptive rating) and speaking (expressive rating) on a six-point scale. Results of these ratings are reported by grade in Table 10 and by level of the initial rating in Table 11. Each table contains the number of students, the percent of students advancing the indicated number of levels, and the average number of levels advanced for the two types of ratings.

In addition to the tests discussed above, the Criterion Referenced English Syntax Test (CREST) was also used to measure growth in English language proficiency. This instrument tests mastery of specific syntactic skills at three levels. Levels I and II contain 25 objectives each, such as knowledge of present-tense forms of the verb "to be" (Level I), or possessive adjectives and pronouns (Level II). Material at the advanced Level III is organized into 15 objectives, such as reflexive pronouns. At each level, students are asked to complete four items per objective. The items are multiple choice and consist of sentence frames for which students must choose a word or phrase from four possibilities. Mastery of a skill objective is determined by a student's ability to answer three out of four items correctly.

This report analyzes students' performance at the three test levels. Performance breakdowns are reported in two ways: by grade of the students tested irrespective of test level taken, with information on the average number of objectives mastered and the average number of objectives mastered per month of instruction (see Tables 12 and 14), and by both grade and level of test taken with information only on the average number of objectives mastered (see Tables 13 and 15).

Comparisons of program students with mainstream students in mathematics, science, and social studies were, according to the program objectives, to have been made using the results of City-wide and Regents examinations. Because data on these tests were not reported, such comparisons could, unfortunately, not be made.

Rates of success of students in mathematics, science, social studies, and native language arts courses taught in the bilingual program are, however, reported by course and by grade in Tables 19 through 22. These tables contain the numbers of students reported as taking the relevant courses and the percent passing, for fall and for spring courses separately.

Comparisons of the attendance rates of program participation with that of the school as a whole are presented by grade in Table 23. This table contains average rates for the school and for the participants, grouped by grade, the percent differences, values of the t statistic and their levels of statistical significance. Although the t statistic, used here is slightly different than that described above, it again indicates the extent to which the observed percentage differences vary from what might be expected by chance.

A comparison of the program drop-out rate with that of the school as a whole is contained in Table 24. In this table are reported the number of

program and school students, the number of dropouts in each group, the percent dropping out, the value of the Chi-square statistic (which tests the significance of the difference between the two rates), and its level of statistical significance.

Table 10. Percent of students advancing on the New York City Language Fluency Rating Scales by grade and extent of increase.

(E.S.L. students, entire year)

Grade	Number of Students	Median Initial Level	Number of Levels Advancing 0	1	2	3	4	Mean Number of Levels Advancing
			Receptive Rating					
9	51	D	2	53	45	-	-	1.4
10	73	E	1	36	62	1	-	1.6
11	70	D	-	47	50	3	-	1.6
12	36	C	-	78	22	-	-	1.2
TOTAL	233	D	1	49	48	1	-	1.5
			Expressive Rating					
9	51	4	-	29	65	6	-	1.8
10	73	5	-	14	71	12	3	2.0
11	70	4	-	29	60	11	-	1.8
12	36	3	-	42	53	6	-	1.6
TOTAL	233	4	-	26	63	9	1	1.8

- Less than one percent of program students failed to meet or exceed the program objective of advancing at least one level on their receptive (aural) rating, and all participants reached or exceeded the objective on their expressive (oral) rating.
- Overall, students increased an average of 1.5 levels on the receptive rating and 1.8 levels on the expressive rating.
- The tenth graders, who were generally rated lowest to begin with, advanced the most on both ratings. (See Table 11.)
- Almost half of those with pre- and post-ratings advanced one receptive level, while 48 percent advanced two levels. Almost two-thirds of the students advanced two levels in their expressive rating, however.
- Although it existed at all grade levels, the receptive-expressive difference was especially marked for twelfth graders.

Table 11. Percent of students advancing on the New York City Language Fluency Rating Scales by initial level and extent of increase.

(E.S.L. students, entire year)

Initial Level	Number of Students	Number of Levels Advancing 0	1	2	3	4	Mean Number of Levels Advancing
			Receptive Rating				
B	6	-	100	-	-	-	1.0
C	32	-	78	22	-	-	1.2
D	105	1	65	33	1	-	1.3
E	84	1	20	77	1	-	1.8
F	6	-	-	83	16	-	2.2
			Expressive Rating				
2	7	-	100	-	-	-	1.0
3	36	-	58	42	-	-	1.4
4	106	-	19	76	5	-	1.9
5	71	-	17	59	24	-	2.1
6	13	-	8	62	15	15	2.4

- There is a clear, strong correlation between a student's initial rating and his or her degree of advancement, with those starting out lowest having the largest gains.
- All students initially rated "B" or "2" advanced to the highest level.
- On the receptive rating the modal (most common) increase for those initially rated B, C, or D was one level, while those initially rated E or F generally increased two levels.
- Among the expressive ratings, only those initially at levels 2 or 3 had modal gains of only one level, while those with lower ratings generally gained two levels.

Table 12. Results of the Criterion Referenced English Syntax Test (CREST): number of objectives mastered, and objectives mastered per month.

(E.S.L. Title I Spanish-speaking students, fall)

Grade	# of Students	Average Number of Objectives Mastered Pre	Post	Objectives Mastered*	Average Months of Treatment	Objectives Mastered Per Month
9	41	10.1	14.2	4.1	2.6	1.58
10	55	8.4	12.6	4.2	2.6	1.62
11	49	5.9	8.9	3.0	2.8	1.07
12	19	9.2	10.9	1.7	2.7	0.63
TOTAL	164	8.2	11.7	3.5	2.6	1.35

*Post-test minus pre-test.

- Students in the four grades mastered an average of 3.5 objectives during the fall, at a rate of 1.35 per month of instruction.
- Twelfth-grade students' mastery rate of .63 objectives per month was the lowest of the four grades. However, since all 19 of these students were tested with Level III which has only 15, more difficult, objectives this rate is probably comparable to that of students in the other grades.

Table 13. Performance of students tested on the Criterion Referenced English Syntax Test (CREST): average number of objectives mastered by grade and test level.

(E.S.L. Title I Spanish-speaking students, fall)

	LEVEL I				LEVEL II				LEVEL III			
		Average Number of Objectives Mastered				Average Number of Objectives Mastered				Average Number of Objectives Mastered		
Grade	N	Pre	Post	Gain*	N	Pre	Post	Gain*	N	Pre	Post	Gain*
9	25	7.9	12.2	4.3	12	14.7	18.9	4.2	4	9.7	12.2	2.5
10	16	5.9	10.5	4.5	25	9.3	14.7	5.4	14	9.5	11.2	1.7
11	1	8.0	10.0	2.0	11	5.4	10.6	5.2	37	6.0	8.4	2.4
12	----------				----------				19	9.2	10.9	1.7
TOTAL	42	7.2	11.5	4.3	48	9.7	14.8	5.1	74	7.7	9.8	2.2

NOTE: number of objectives for each level: Level I (25), Level II (25), Level III (15).

*Post-test minus pre-test.

.Proportionate gains of students tested with the three levels of the test were equivalent.

.Level I students' gain of 4.3 objectives was a mastery 24 percent of the 17.8 (25 - 7.2) not passed on the fall pre-test.

.Level II students' gain of 5.1 objectives was a mastery of 33 percent of the 15.3 objectives (25 - 9.7) not passed on the pre-test.

..Level III students' gain of 2.2 objectives was a mastery of 30 percent of the 7.3 objectives (15 - 7.7) not passed on the pre-test.

.Students' post-test scores indicate that the level of mastery tended to increase with the level of the test. Level I students passed 11.5 of the 25 objectives (46 percent), Level II students passed 14.8 of their 25 objectives (59 percent) and Level III students passed 9.8 of their 15 objectives (65 percent).

Table 14. Results of the Criterion Referenced English Syntax Test (CREST): number of objectives mastered, and objectives mastered per month.

(E.S.L. Title I Spanish-speaking students, spring)

Grade	# of Students	Average Number of Objectives Mastered Pre	Post	Objectives Mastered*	Average Months of Treatment	Objectives Mastered Per Month
9	37	9.7	13.7	4.0	2.7	1.5
10	48	9.3	12.9	3.6	2.8	1.3
11	49	7.0	10.3	3.3	2.8	1.2
12	22	9.4	11.4	2.0	2.8	0.7
TOTAL	156	8.7	12.1	3.4	2.8	1.2

*Post-test minus pre-test.

- Students mastered an average of 3.4 objectives during the spring, at a rate of 1.2 objectives per month of instruction.
- The twelfth-grade group had again the lowest rate of gain and was again the only group attaining less than one new objective per month of instruction. In this semester, however, those pre- and post-tested at this grade level took test Level II and their poor gains apparently accurately reflect student learning at this level.

Table 15. Performance of students tested on the Criterion Referenced English Syntax Test (CREST): average number of objectives mastered by grade and test level.

(E.S.L. Title I Spanish-speaking students, spring)

	LEVEL I				LEVEL II				LEVEL III			
		Average Number of Objectives Mastered				Average Number of Objectives Mastered				Average Number of Objectives Mastered		
Grade	N	Pre	Post	Gain*	N	Pre	Post	Gain*	N	Pre	Post	Gain*
9	18	7.5	11.3	3.8	18	11.6	16.1	4.5	1	15.0	15.0	0
10	16	8.1	12.1	4.0	18	10.5	14.6	4.1	14	9.1	11.7	2.6
11	1	19.0	22.0	3.0	8	4.9	8.7	3.8	40	7.2	10.3	3.1
12	----------				21	9.4	11.4	2.0	1	11.0	12.0	1.0
TOTAL	35	8.1	12.0	3.9	65	9.7	13.2	3.5	56	7.9	10.7	2.8

NOTE: number of objectives for each level: Level I (25), Level II (25), Level III (15).

*Post-test minus pre-test.

.Proportionate gains by students were equivalent among students tested with Levels I and II and were greater among students tested with Level III.

.Both Level I and II students mastered 23 percent of the objectives they failed on the spring pre-test. Level I students passed 3.9 of the 16.9 (25 - 8.1) they had not passed earlier and Level II students passed 3.5 objectives of the 15.3 (25 - 9.7) which remained after their pre-test.

.Level III students' gain of 2.8 objectives was a mastery of 39 percent of the 7.1 (15 - 7.9) not passed on the pre-test.

.Students' post-test scores increased with the level of the test. Level I students passed 12 out of the 25 objectives (48 percent). Level II students passed 13.2 out of their 25 (53 percent) and Level III students passed 10.7 out of the 15 objectives (71 percent).

Table 16. English reading achievement.

Significance of mean percentile differences between initial and final test scores in English language reading achievement of students with full instructional treatment on the Metropolitan Achievement Test (total reading, form G, Intermediate Level, by grade).

		Pre-test		Post-test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre/post	t	p	ES
9	20	63.1	7.8	72.1	6.6	9.1	.697	7.10	.001	1.59
10	34	62.3	10.0	71.9	7.9	9.6	.753	8.42	.001	1.44
11	56	50.9	13.5	66.2	10.7	15.3	.870	16.96	.001	2.27
12	34	56.9	16.7	74.6	10.9	17.8	.865	11.40	.001	1.96

- Forty-five percent of program participants took the reading section of the Metropolitan Achievement Test at both pre- and post-test.
- Increases ranged from an average of nine points for ninth graders to almost 18 points for twelfth graders and were highly statistically significant at all grade levels.
- Improvements were very significant, educationally, at all grade levels, as well, and especially so for eleventh graders.
- Gains, to a limited and unknown degree, are attributable to greater familiarity with the test as well as to greater general English reading skills.

Table 17. Native language reading achievement.

Significance of mean total raw score differences between initial and final test scores in native language reading achievement of students with full instructional treatment on the Prueba de Lectura (total reading, form CEs by grade and test level).

Grade	N	Pre-test Mean	Pre-test Standard Deviation	Post-test Mean	Post-test Standard Deviation	Mean Difference	Corr. Pre/post	t	p	ES
				Level 2						
9	25	58.8	7.7	72.6	6.7	13.8	.054	6.97	.001	1.39
10	21	58.0	17.7	73.0	12.1	15.0	.819	6.88	.001	1.50
11	7	46.4	12.4	64.3	9.9	17.9	.364	3.71	.01	1.40
TOTAL	53	56.9	13.2	71.1	9.9	14.8	.643	10.57	.0001	1.45
				Level 4						
9	28	69.5	12.2	78.9	11.0	9.4	.828	7.15	.001	1.35
10	33	74.6	16.3	86.1	14.8	11.5	.816	6.92	.001	1.20
11	46	86.5	21.0	98.0	16.8	11.6	.837	6.81	.001	1.00
12	28	89.4	16.1	101.8	15.2	12.4	.768	6.13	.001	1.16
TOTAL	136	80.6	18.9	91.9	17.1	11.3	.850	13.20	.0001	1.13

- Approximately 60 percent of program students were pre- and post-tested with the Prueba de Lectura.
- Gains made by program participants in all grades at both levels of the test were highly significant statistically and educationally.
- Because the same form of the test was administered at both pre- and post-test, gains probably reflect greater familiarity with the test itself as well as improved general knowledge.
- An examination of the pre-test mean scores suggests that the level of the test administered was generally appropriate to all groups except the eleventh and twelfth graders given Level 4, some of whom probably should have been given Level 5.
- The large size of most correlations indicates that the test, especially at Level 4, was a relatively reliable measure.

Table 18. Mathematics achievement.

Significance of mean differences between initial and final test scores in Spanish language Mathematics achievement of students with full instructional treatment on the Prueba de Aprovechamiento en Matematicas (Intermediate level). Scores are percent correct.

		Pre-test		Post-test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre/post	t	p	ES
9	22	64.5	7.3	71.8	6.2	7.4	.531	5.21	.001	1.11
10	59	62.3	15.6	73.5	12.6	11.3	.795	9.17	.001	1.19
11	52	66.0	15.3	75.9	11.0	9.8	.827	8.11	.001	1.12
12	31	62.2	17.9	75.7	12.8	13.5	.777	6.64	.001	1.19

- Just over one-half of program students were reported to have been pre- and post-tested with the Prueba de Aprovechamiento en Matematicas.
- Gains made by program participants in all grades at both levels of the test were highly significant statistically and educationally.
- An examination of the pre-test mean scores suggests that students in higher grades did not have a greater facility in math than did younger students, even in their native language.
- The large size of most correlations (excepting that for the ninth graders) indicates that the test was, for most students, a relatively reliable measure.

Table 19. Number of students attending courses and percent passing teacher-made examinations in mathematics.

FALL COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
General Math I	59	75							59	75
General Math III			72	78					72	78
Intermediate Algebra I					66	83			66	83
Geometry I							36	86	36	86
TOTAL	59	75	72	78	66	83	36	86	233	80

SPRING COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
General Math I	3	67							3	67
General Math II	62	92							62	92
Algebra I, Academic			72	92					72	92
Intermediate Algebra II					66	86			66	86
Geometry II							36	86	36	86
TOTAL	65	91	72	92	66	86	36	86	239	89

- Almost three-fourths of program participants were reported to have completed a mathematics course in both the fall and spring.
- The level of course taken was clearly determined by the grade level of the student, in spite of the evidence in the preceding table that students in the upper grades were not generally better prepared than their younger peers.
- In spite of the above, in the fall semester, the older students generally were more successful than the ninth and tenth graders. In the spring, however, this pattern was mildly reversed.
- In general, students at all levels and in all grades did quite well.

Table 20. Number of students attending courses

and percent passing teacher-made examinations in science.

FALL COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
General Science I	59	71							59	71
General Science II, Academic			72	78					72	78
Biology I, General					66	76			66	76
Biochemistry							36	89	36	89
TOTAL	59	71	72	78	66	76	36	89	233	77

SPRING COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
General Science I	65	85							65	85
General Science II, Academic			72	89					72	89
Biology I, General					65	78			65	78
Biochemistry				-			35	94	35	94
TOTAL	65	85	72	89	65	78	35	94	237	86

- In science, as in math, reported course enrollments represent approximately three of four program students and again, were clearly determined by student grade level.
- In the fall, as with mathematics, passing rates are generally higher for the more advanced students, but in the spring only the eleventh graders had a rate less than 85 percent.
- Again, students generally did quite well.

Table 21. Number of students attending courses

and percent passing teacher-made examinations in social studies.

FALL COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
World History I, Academic	58	81							58	81
World History II, Academic			72	67					72	67
American History I, Academic					66	79			66	79
Latin American Studies							36	89	36	89
TOTAL	58	81	72	67	66	79	36	89	232	77

SPRING COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
World History I, Academic	65	88							65	88
World History II, Academic			72	79					72	79
American History I, Academic					65	80			65	80
Latin American Studies							35	89	35	89
TOTAL	65	88	72	79	65	80	35	89	237	83

.Approximately three-fourths of program participants were also reported to have been enrolled in social studies courses in both semesters.

.The course taken was again determined by student grade.

.With the possible exception of tenth graders in the fall, all groups did very well.

Table 22. Number of students attending courses and percent passing teacher-made examinations in native language arts.

FALL COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
Native Language Level I, Academic	31	84							31	84
Native Language Level I, General	28	64	7	71	5	20			40	60
Native Language Level II, Academic			65	89					65	89
Native Language Level III, Academic					61	100			61	100
Native Language Level IV, Academic							35	97	35	97
TOTAL	59	75	72	87	66	94	35	97	232	87

SPRING COURSES	GRADE 9 N	GRADE 9 % PASSING	GRADE 10 N	GRADE 10 % PASSING	GRADE 11 N	GRADE 11 % PASSING	GRADE 12 N	GRADE 12 % PASSING	TOTAL N	TOTAL % PASSING
Native Language Level I, Academic	35	94							35	94
Native Language Level I, General	30	97	7	100	5	40			42	90
Native Language Level II, Academic			66	100					66	100
Native Language Level III, Academic					61	100			61	100
Native Language Level IV, Academic							35	97	35	97
TOTAL	65	95	73	100	66	95	35	97	239	97

- Again, approximately three-fourths of program participants were reported to have completed a course in Spanish language arts in both semesters.
- While all twelfth graders were enrolled in Level IV academic Spanish, some students from each of the ninth through eleventh grades were enrolled in Level I, general Spanish, indicating some classification according to student preparation.
- In the fall, as with science and math, passing rates were higher in the upper grades, but, again, this was not true in the spring.
- The low fall rates were due almost entirely to those taking Level I, general Spanish, and with this exception, all groups had very high passing rates in both semesters.

Table 23. Significance of the difference between attendance percentages of program students and the attendance percentage of the school.

Average School-Wide Attendance Percentage: 60.0

Grade	N	Mean Percentage	Standard Deviation	Percentage Difference	t	p
9	62	83.8	13.2	23.8	14.18	.0001
10	73	89.6	11.7	29.6	21.54	.0001
11	69	93.2	6.2	33.2	44.52	.0001
12	36	91.1	6.2	31.1	30.25	.0001
TOTAL	240	89.4	10.7	29.4	42.35	.0001

- Students for whom attendance data was reported at all grade levels exceeded an average of 80 percent attendance, a figure 20 percent higher than the school average.
- The differences between school and program rates are highly significant, statistically, at all grade levels.
- The average program rate of almost 90 percent is nearly 30 percent higher than the school average.

Table 24. Significance of the difference between the drop-out rate of program students and that of the school.

	Number of Students	Dropouts Number	Percent	Chi-square	p
Program	319	32*	10	44.95	.0001
School	3,468	930	27		

*Number of students reported as discharged, reason unknown, dropped out, or truant.

- The program drop-out rate of ten percent is only approximately one-third as high as that for the school as a whole.
- The difference between the two rates is very highly significant, statistically.

SUMMARY OF FINDINGS

In English reading achievement in the fall, program students tested with the Criterion Referenced English Syntax Test demonstrated an average gain of 1.35 objectives mastered per month of instruction. In the spring, the demonstrated average gain was 1.2 objectives mastered per month. Of all groups tested, the twelfth-grade students had the lowest rate of gain in both semesters.

Forty-five percent of program students were pre- and post-tested with the reading section of the Metropolitan Achievement Test. Gains at all grade levels were highly statistically significant. Gains for the eleventh grade, in particular, were determined to be of particularly high educational significance.

Over 99 percent of program students met the program objective of advancing at least one level on the receptive rating on the New York City Language Fluency Rating Scale. All program participants reached or exceeded the criterion on the expressive rating of the scale. There was a clear correlation between each student's initial rating and his/her degree of advancement, with those starting out lowest having the largest gains.

In native language reading, program students in all grades demonstrated statistically and educationally significant gains at both levels of the Prueba de Lectura.

In mathematics achievement, gains made by program students in all grades at both levels of the Prueba de Aprovechamiento were highly significant statistically and educationally. On teacher-made mathematics examinations, the overall passing rates were 80 percent in the fall and 89 percent in the spring. In the fall, the highest passing rates were

achieved by students in the upper grades (11 and 12). In spring, this pattern was reversed with students in grades 9 and 10 achieving the higher passing rates.

The overall passing rate in science courses in the fall was 77 percent. In the spring the overall passing rate was 86 percent. In both semesters, the highest passing rates were achieved by the twelfth graders.

In social studies courses in the fall, the overall passing rate was 77 percent. The overall passing rate in the spring was 83 percent. Again in both semesters, twelfth-grade students achieved the highest passing rates.

In native language arts courses, the overall passing rate was 87 percent in the fall and 97 percent in the spring. Ninth-grade students in the fall achieved the lowest passing rate (75 percent) of all groups of students.

The average attendance rate for program students was almost 90 percent, a figure 30 percent higher than the school-wide average. The program drop-out rate of 10 percent was approximately one-third as high as that for the school as a whole.

VII. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Although the Competency Based Bilingual/Bicultural Project is only in its first year of operation, it is clearly a firmly-grounded, mature program with demonstrated commitment on the parts of administrative, teaching, resource, and paraprofessional staff. The academic success of the students is remarkable and far above that of students in the school as a whole.

RECOMMENDATIONS

On the basis of several site visits and interviews with personnel and students, the evaluation team recommends:

1. that full support of the program be continued in recognition of the demonstrated effectiveness of the program;
2. that the student selection process be more clearly defined;
3. that greater effort be made to exit students from the program to allow those with greater need to enter;
4. that the in-service training program be expanded to include topics in the various content areas, especially mathematics, science, and social studies;
5. that a bilingual psychological counselor be added to the staff. In addition to doing personal counseling, this staff member should explore community resources for addressing family problems which affect student health, attendance, and performance.

VIII. APPENDIX

DESCRIPTION OF

Rating Scale of Pupils' Ability to Speak English

VOCABULARY

	NE	0	1	2	3	4	5
Description:	A child who does not respond because his dominant language is other than English. Cannot speak any English	A child who does not produce language for other reasons	Language is limited to identification; however, these responses are basically erroneous and inappropriate labels	Responses mostly identification, yielding general labels and unclear function responses. Much searching for correct word, but does not always find it	Is able to identify "things" with concrete specific labels as well as general ones; is able to respond in terms of function, but can make few relationships	Responds in terms of identification and function adequately, is able to show relationships in language reproduction, appropriate for age level. *Probing is required*	Same as No. 4 but without probing
Examples:			*For example:* "ball" for apple "eat" for banana or mouth "bird" for cook register	*For example:* "food" or "fruit" but not kind "box" for register "thing," "it," or "stuff" but can't specify even with probing	*For example:* "to keep money in" "to weigh food" "money machine"	*For example:* "It would be fat like a pear with dirty bean legs" "because she's hungry." "She's his sister" "He's going to take them home"	

STRUCTURE

Description:	A child who does not respond because his dominant language is other than English. Cannot speak any English	A child who does not produce language for other reasons	Limited to single word responses; relies on gesture to convey meaning	No control of common patterns; phrase responses; indiscriminate selection of tense and gender; omits important words; unable to express plural or possessive appropriately	Disjunctive control of common patterns; frequent errors in plural formation, gender, tense selection or agreement, word order and possessives	Adequate control of common patterns; restricted use of complex patterns; minimal error in gender, tense selection, agreement, plurals, and possessives, appropriate for age level	Complete control of complexity and variety of patterns available to a native speaker, appropriate for age level
Examples:			*For example:* "nose" "apple" "money" "banana"	*For example:* "turned it" "eating room" "He lived it" "looking things"	*For example:* "He have legs" "is taking them to home" "He have them in his house" "How many it cost?"	*For example:* He is taking them to his mother" "Because she asked him for one"	*For example:* "She's hungry, because she didn't have breakfast" "He's going to take them home to share with his other brothers and sisters"

PRONUNCIATION

Criterion description:	A child who does not respond because his dominant language is other than English. Cannot speak any English	A child who does not produce language for other reasons	Habitual mispronunciation of English consonant and vowel sounds	Frequent mispronunciation of English consonant and vowel sounds	Occasional mispronunciation of English consonant and vowel sounds	Infrequent mispronunciation of English consonant and vowel sounds	Standard English pronunciation

INTONATION

Criterion description:	A child who does not respond because his dominant language is other than English. Cannot speak any English	A child who does not produce language for other reasons	Total interference of a foreign language	Excessive interference of a foreign language	Frequent interference of a foreign language	Occasional interference of a foreign langua	Standard English intonation

Oral Language Ability Rating Scale, New York City

Scale for Rating Pupil's Ability to Speak English

Enter for each pupil the letter A, B, C, D, E, F corresponding to his estimated ability to speak English in the classroom, defined as follows:

A -- Speaks English, for his age level, like a native - with no foreign accent or hesitancy due to interference of a foreign language.

B -- Speaks English with a foreign accent, but otherwise approximates the fluency of a native speaker of like age level. Does not hesitate because he must search for English words and language forms.

C -- Can speak English well enough for most situations met by typical native pupils of like age, but still must make a conscious effort to avoid the language forms of some foreign language. Depends, in part, upon translation of words and expressions from the foreign language into English, and therefore speaks hesitantly upon occasion.

D -- Speaks English in more than a few stereotyped situations but speaks it haltingly at all times.

E -- Speaks English only in those stereotyped situations for which he has learned a few useful words and expressions.

F -- Speaks no English.

The expected outcomes listed for each grade in this handbook can serve as a guide for evaluating achievement and relating them to the above scale. This is particularly significant for the C, B, and A designations that use as a comparison typical native pupils of like age.